



6560-50-P

## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Parts 52 and 81

#### [EPA-R09-OAR-2018-0181; FRL-9977-77-Region 9]

### **Approval and Promulgation of Air Quality State Implementation Plans; California; Chico Redesignation Request and Maintenance Plan for the 2006 24-hour PM<sub>2.5</sub> Standard.**

**Agency:** Environmental Protection Agency (EPA).

**Action:** Proposed rule.

**Summary:** The Environmental Protection Agency (EPA) is proposing to approve, as a revision of the California state implementation plan (SIP), the State's request to redesignate the Chico nonattainment area to attainment for the 2006 24-hour fine particulate matter (PM<sub>2.5</sub>) national ambient air quality standard. The EPA is also proposing to approve the PM<sub>2.5</sub> maintenance plan and the determination that contributions from motor vehicle emissions to the PM<sub>2.5</sub> pollution in the Chico nonattainment area are insignificant. The EPA is proposing this action because the SIP revision meets the requirements of the Clean Air Act and EPA guidance for such plans. We are taking comments on this proposal and plan to follow with a final action.

**DATES:** Any comments on this proposal must arrive by **[Insert date 30 days after date of publication in the Federal Register]**.

**ADDRESSES:** Submit comments, identified by docket number EPA-R09-OAR-2018-0181, at <https://www.regulations.gov>, or via email to [Vagenas.Ginger@epa.gov](mailto:Vagenas.Ginger@epa.gov). For comments submitted at Regulations.gov, follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from Regulations.gov. For either manner of submission,

the EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.*, on the web, cloud, or other file sharing system). For additional submission methods, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section. For the EPA's full public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <http://www2.epa.gov/dockets/commenting-epa-dockets>.

**FOR FURTHER INFORMATION CONTACT:** Ginger Vagenas, EPA Region IX, 415-972-3964, [Vagenas.Ginger@epa.gov](mailto:Vagenas.Ginger@epa.gov).

**SUPPLEMENTARY INFORMATION:** Throughout this document, the terms “we,” “us,” and “our” mean the EPA.

## **Table of Contents**

- I. Summary of Today's Proposed Action
- II. Background
  - A. The PM<sub>2.5</sub> NAAQS
  - B. Designation of PM<sub>2.5</sub> Nonattainment Areas
  - C. PM<sub>2.5</sub> Planning Requirements
- III. Procedural Requirements for Adoption and Submittal of SIP Revisions
- IV. Substantive Requirements for Redesignation
- V. Evaluation of the State's Redesignation Request for the Chico PM<sub>2.5</sub> Nonattainment Area
  - A. Determination that the Area Has Attained the PM<sub>2.5</sub> NAAQS
  - B. The Area Must Have a Fully Approved SIP Meeting the Requirements Applicable for Purposes of Redesignation Under Section 110 and Part D
  - C. The Area Must Show the Improvement in Air Quality is Due to Permanent and Enforceable Emission Reductions
  - D. The Area Must Have a Fully Approved Maintenance Plan Under Section 175A

- VI. Proposed Action and Request for Public Comment
- VII. Statutory and Executive Order Reviews

## **I. Summary of Today's Proposed Action**

Under Clean Air Act (CAA or “the Act”) section 107(d)(3)(D), the EPA is proposing to approve California’s request to redesignate the Chico nonattainment area to attainment for the 2006 24-hour fine particulate matter (PM<sub>2.5</sub>) national ambient air quality standards (NAAQS or “standards”). We are doing so based on our conclusion that the area has met the five criteria for redesignation under CAA section 107(d)(3)(E). Specifically, we have concluded that: (1) the area has attained the 24-hour PM<sub>2.5</sub> NAAQS in the 2014 – 2016 time period and continues to attain the PM<sub>2.5</sub> standard since that time; (2) the relevant portions of the California SIP are fully approved; (3) the improvement in air quality is due to permanent and enforceable reductions in emissions; (4) California has met all requirements applicable to the Chico PM<sub>2.5</sub> nonattainment area with respect to section 110 and part D of the CAA; and (5) the *Chico, CA/Butte County PM<sub>2.5</sub> Nonattainment Area Redesignation Request and Maintenance Plan* (“Chico PM<sub>2.5</sub> Plan” or “Plan”) meets the requirements of section 175A of the CAA.

In addition, the EPA is proposing to approve the Chico PM<sub>2.5</sub> Plan as a revision to the SIP under section 110(k)(3) of the CAA because we find that the maintenance demonstration shows how the area will continue to attain the 24-hour PM<sub>2.5</sub> NAAQS for at least 10 years beyond redesignation (through 2030) and that the contingency provisions describing the action the Butte County Air Quality Management District (BCAQMD or “District”) will take in the event of a future monitored violation meet all applicable requirements for maintenance plans and section 175A of the CAA.

The EPA is proposing these actions because the SIP revision meets the requirements of the CAA and EPA guidance for such plans.

## **II. Background**

### *A. The PM<sub>2.5</sub> NAAQS*

Particulate matter includes particles with diameters that are generally 2.5 microns or smaller (PM<sub>2.5</sub>) and particles with diameters that are generally 10 microns or smaller (PM<sub>10</sub>). It contributes to effects that are harmful to human health and the environment, including premature mortality, aggravation of respiratory and cardiovascular disease, decreased lung function, visibility impairment, and damage to vegetation and ecosystems. Individuals particularly sensitive to PM<sub>2.5</sub> exposure include older adults, people with heart and lung disease, and children (78 FR 3086 at 3088, January 15, 2013). PM<sub>2.5</sub> can be emitted directly into the atmosphere as a solid or liquid particle (“primary PM<sub>2.5</sub>” or “direct PM<sub>2.5</sub>”) or can be formed in the atmosphere (“secondary PM<sub>2.5</sub>”) as a result of various chemical reactions among precursor pollutants such as nitrogen oxides (NO<sub>x</sub>), sulfur oxides (SO<sub>x</sub>), volatile organic compounds (VOC), and ammonia (NH<sub>3</sub>).<sup>1</sup>

Under section 109 of the CAA, the EPA has established national ambient air quality standards for certain pervasive air pollutants (referred to as “criteria pollutants”) and conducts periodic reviews of the NAAQS to determine whether they should be revised or whether new NAAQS should be established. The EPA sets the NAAQS for criteria pollutants at levels

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<sup>1</sup> EPA, Air Quality Criteria for Particulate Matter, No. EPA/600/P-99/002aF and EPA/600/P-99/002bF, October 2004.

required to protect public health and welfare.<sup>2</sup> PM<sub>2.5</sub> is one of the ambient pollutants for which the EPA has established health-based standards. Section 110(a) of the CAA requires states to submit regulations that control PM<sub>2.5</sub> emissions.

On July 18, 1997, the EPA revised the NAAQS for particulate matter to add new standards for PM<sub>2.5</sub>. The EPA established primary and secondary annual and 24-hour standards for PM<sub>2.5</sub> (62 FR 38652). The annual standard was set at 15.0 micrograms per meter cubed (µg/m<sup>3</sup>) based on a 3-year average of annual mean PM<sub>2.5</sub> concentrations, and the 24-hour (daily) standard was set at 65 µg/m<sup>3</sup> based on the 3-year average of the annual 98<sup>th</sup> percentile values of 24-hour PM<sub>2.5</sub> concentrations at each population-oriented monitor within an area.<sup>3</sup>

On October 17, 2006, the EPA retained the annual average NAAQS at 15 µg/m<sup>3</sup> but revised the level of the 24-hour PM<sub>2.5</sub> NAAQS to 35 µg/m<sup>3</sup> based on a 3-year average of the annual 98<sup>th</sup> percentile values of 24-hour concentrations (71 FR 61144).<sup>4</sup>

On December 14, 2012, the EPA promulgated the 2012 PM<sub>2.5</sub> NAAQS, including a revision of the annual standard to 12.0 µg/m<sup>3</sup> based on a 3-year average of annual mean PM<sub>2.5</sub> concentrations, and maintaining the current 24-hour standard of 35 µg/m<sup>3</sup> based on a 3-year average of the 98<sup>th</sup> percentile of 24-hour concentrations (78 FR 3086, January 15, 2013).

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<sup>2</sup> For a given air pollutant, “primary” national ambient air quality standards are those determined by the EPA as requisite to protect the public health. “Secondary” standards are those determined by the EPA as requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air. CAA section 109(b).

<sup>3</sup> The primary and secondary standards were set at the same level for both the 24-hour and the annual PM<sub>2.5</sub> standards.

<sup>4</sup> Under EPA regulations at 40 CFR part 50, the primary and secondary 2006 24-hour PM<sub>2.5</sub> NAAQS are attained when the annual arithmetic mean concentration, as determined in accordance with 40 CFR part 50, Appendix N, is less than or equal to 35 µg/m<sup>3</sup> at all relevant monitoring sites in the subject area, averaged over a 3-year period.

## *B. Designation of PM<sub>2.5</sub> Nonattainment Areas*

Following promulgation of a new or revised NAAQS, the EPA is required by CAA section 107(d) to designate areas throughout the nation as attaining or not attaining the NAAQS. On April 25, 2007, the EPA promulgated its Clean Air Fine Particle Implementation Rule, codified at 40 CFR part 51, subpart Z, in which the Agency provided guidance for state and tribal plans to implement the PM<sub>2.5</sub> NAAQS (72 FR 20586). Effective December 14, 2009, the EPA established initial air quality designations under subpart 1 of the Act for most areas in the United States for the 2006 24-hour PM<sub>2.5</sub> NAAQS, including the Chico area (74 FR 58688, November 13, 2009).<sup>5</sup>

The United States Court of Appeals District of Columbia Circuit (D.C. Circuit) remanded the Clean Air Fine Particle Implementation Rule and the final rule entitled “Implementation of the New Source Review (NSR) Program for Particulate Matter Less than 2.5 Micrometers (PM<sub>2.5</sub>)” (73 FR 28321, May 16, 2008) (collectively, “1997 PM<sub>2.5</sub> Implementation Rules”) to the EPA on January 4, 2013, in *Natural Resources Defense Council v. EPA*, 706 F.3d 428 (D.C. Cir. 2013). The Court found that the EPA erred in implementing the 1997 PM<sub>2.5</sub> NAAQS pursuant to the general implementation provisions of subpart 1 rather than the particulate matter-specific provisions of Part D of title I (subpart 4). The EPA responded to the D.C. Circuit’s decision by identifying all PM<sub>2.5</sub> nonattainment areas for the 1997 and 2006 nonattainment areas for the 1997 and 2006 NAAQS as “moderate” nonattainment areas under subpart 4 and by establishing a new

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<sup>5</sup> All 1997 and 2006 PM<sub>2.5</sub> NAAQS areas were designated under subpart 1 of the Act. Subpart 1 contains the general requirements for nonattainment areas for any pollutant governed by a NAAQS and is less prescriptive than the other subparts of title I, part D.

SIP submission date of December 31, 2014, for moderate area attainment plans and for any additional attainment-related or nonattainment new source review plans necessary for areas to comply with the requirements applicable under subpart 4 (79 FR 31566, June 2, 2014).

On July 29, 2016, EPA issued a rule entitled, “Fine Particulate Matter National Ambient Air Quality Standards: State Implementation Plan Requirements” (“PM<sub>2.5</sub> SIP Requirements Rule”) that clarifies how states should meet the statutory SIP requirements that apply to areas designated nonattainment for any PM<sub>2.5</sub> NAAQS under subparts 1 and 4 (81 FR 58010, August 24, 2016). It does so by establishing regulatory requirements and by providing guidance that is applicable to areas that are currently designated nonattainment for existing PM<sub>2.5</sub> NAAQS and areas that are designated nonattainment for any PM<sub>2.5</sub> NAAQS in the future. In addition, the rule responds to the D.C. Circuit’s remand of the 1997 PM<sub>2.5</sub> Implementation Rules. As a result, the requirements of the rule also govern future actions associated with states’ ongoing implementation efforts for the 1997 and 2006 PM<sub>2.5</sub> NAAQS.

The Chico PM<sub>2.5</sub> nonattainment area is located within Butte County, California, in the northern Sacramento Valley, which is defined by the southern Cascade Mountains and northern Sierra Nevada mountains to the east and the Coastal Mountains to the north and west. As noted in the Chico PM<sub>2.5</sub> Plan, the surrounding mountains provide “a substantial physical barrier to both locally created pollution and the pollution that has been transported northward on prevailing winds from the metropolitan areas to the south.” (Plan, p. 4.) Most of the population lives and works at elevations below 1,000 feet, where wintertime inversions can result in poor air quality.

The local air district with primary responsibility for air quality planning in this area is the BCAQMD. Authority for regulating sources under State jurisdiction in the Chico nonattainment area is split between the District, which has responsibility for regulating stationary and most area

sources, and the California Air Resources Board (CARB), which has responsibility for regulating most mobile sources. The District worked cooperatively with CARB in preparing the Chico PM<sub>2.5</sub> redesignation request and maintenance plan.

### *C. PM<sub>2.5</sub> Planning Requirements*

Within three years of the effective date of designations, states with areas designated as nonattainment for the 2006 24-hour PM<sub>2.5</sub> NAAQS are required to submit SIP revisions that, among other elements, provide for implementation of reasonably available control measures (RACM), reasonable further progress (RFP), attainment of the standard as expeditiously as practicable but no later than five years from the nonattainment designation (in this instance, no later than December 14, 2014), as well as contingency measures.<sup>6</sup> Prior to the due date for these submissions, the State requested that the EPA make a determination that, based on quality assured and certified data from the 2008-2010 period, the Chico PM<sub>2.5</sub> nonattainment area had attained the 2006 24-hour PM<sub>2.5</sub> NAAQS.<sup>7</sup> In addition to requesting a finding of attainment, the State requested that the EPA suspend the attainment-related planning requirements.

Effective October 10, 2013, the EPA determined that the Chico nonattainment area had attained the 2006 24-hour PM<sub>2.5</sub> standard based on the 2010-2012 monitoring period (78 FR 55225, September 10, 2013). Based on that determination and pursuant to 40 CFR 51.1004(c), the requirements for this area to submit an attainment demonstration, together with RACM, an RFP plan, and contingency measures for failure to meet RFP and attainment deadlines were

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<sup>6</sup> See CAA sections 172(a)(2), 172(c)(1), 172(c)(2), and 172(c)(9).

<sup>7</sup> Letter from James N. Goldstene, Executive Officer, CARB, to Jared Blumenfeld, Regional Administrator, EPA Region 9, dated June 2, 2011.



suspended for so long as the area continued to attain the 2006 24-hour PM<sub>2.5</sub> NAAQS or until the area is redesignated to attainment.<sup>8</sup> The EPA subsequently issued a determination that the Chico area had attained the 2006 24-hour PM<sub>2.5</sub> NAAQS by the applicable attainment date of December 31, 2015, based on 2013-2015 data (82 FR 21711, May 10, 2017). On December 18, 2017, CARB submitted the Chico PM<sub>2.5</sub> Plan and requested that the EPA redesignate the Chico PM<sub>2.5</sub> nonattainment area to attainment for the 2006 24-hour PM<sub>2.5</sub> NAAQS.

### **III. Procedural Requirements for Adoption and Submittal of SIP Revisions**

Section 110(l) of the Act requires states to provide reasonable notice and public hearing prior to adoption of SIP revisions. CARB's December 18, 2017 submittal of the Chico PM<sub>2.5</sub> Plan documents the public review process followed by BCAQMD and CARB in adopting the Chico PM<sub>2.5</sub> Plan prior to submittal to the EPA as a revision to the California SIP. The submittal provides evidence that reasonable notice of a public hearing was provided to the public and that a public hearing was conducted prior to adoption. Specifically, a notice of public hearing was published on September 26, 2017, in the Chico Enterprise-Record, a newspaper of general circulation in the City of Chico and Butte County. The notice announced the availability of the Chico PM<sub>2.5</sub> Plan at the District office and on its website, and it opened the comment period 30 days prior to the public hearing. The public hearing was held on October 26, 2017. No comments on the Plan were made during the public hearing and no written comments were received during the public comment period. Following adoption by BCAQMD's Air Quality Governing Board,

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<sup>8</sup> For more information on the regulatory basis for determining attainment of the NAAQS, see the proposed determination of attainment (77 FR 65651, October 30, 2012).

the District provided the maintenance plan to CARB and requested that it submit the redesignation request and maintenance plan to the EPA.<sup>9</sup>

On November 16, 2017, CARB adopted the Chico PM<sub>2.5</sub> Plan, as certified in Resolution 17-41. No public comments were received during the CARB hearing. CARB submitted the Plan to the EPA on December 18, 2017. On February 15, 2018, CARB provided additional information regarding its development of the 2012 winter emission inventory and other emissions inventories for the Chico PM<sub>2.5</sub> Plan.<sup>10</sup> Based on the documentation provided, we find that submittal of the Chico PM<sub>2.5</sub> Plan as a revision to the California SIP satisfies the procedural requirements of section 110(l) of the Act.

Section 110(k)(1)(B) of the CAA requires the EPA to determine whether a SIP submittal is complete within 60 days of receipt. This section also provides that any plan that we have not affirmatively determined to be complete or incomplete will become complete by operation of law six months after the day of submittal. A completeness review allows us to determine if the submittal includes all the necessary items and information we need to act on it.

We make completeness determinations using criteria we have established in 40 CFR part 51, Appendix V. These criteria fall into two categories: administrative information and technical support information. The administrative information provides documentation that the state has followed basic administrative procedures during the SIP adoption process. The technical support

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<sup>9</sup> Letter from W. James Wagoner, Air Pollution Control Officer, BCAQMD, to Richard Corey, Executive Officer, CARB, dated October 31, 2017.

<sup>10</sup> Letter with enclosures from Sylvia Vanderspeck, Chief, Air Quality Planning Branch, CARB, to Gwen Yoshimura, Manager, Air Quality Analysis Section, EPA Region 9.

information provides the information we need to determine the impact of the proposed revisions on attainment and maintenance of the air quality standard.

We notify a state of our completeness determination by letter unless the submittal becomes complete by operation of law. A finding of completeness does not approve a submittal as part of the SIP nor does it indicate that the SIP is approvable. It does start a 12-month clock for the EPA to act on the SIP submittal. On April 5, 2018, we notified CARB that we had determined the submittal of the Chico PM<sub>2.5</sub> Plan to be complete.<sup>11</sup>

#### **IV. Substantive Requirements for Redesignation**

The CAA establishes the requirements for redesignation of a nonattainment area to attainment. Specifically, section 107(d)(3)(E) allows for redesignation provided that the following criteria are met: (1) the EPA determines that the area has attained the applicable NAAQS; (2) the EPA has fully approved the applicable implementation plan for the area under 110(k); (3) the EPA determines that the improvement in air quality is due to permanent and enforceable reductions; (4) the EPA has fully approved a maintenance plan for the area as meeting the requirements of CAA 175A; and (5) the state containing such area has met all requirements applicable to the area under section 110 and part D of the CAA. Section 110 identifies a comprehensive list of elements that SIPs must include, and part D establishes the SIP requirements for nonattainment areas. Part D is divided into six subparts. The generally-

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<sup>11</sup> Letter from Elizabeth J. Adams, Acting Air Division Director, EPA Region 9 to Richard W. Corey, Executive Officer, CARB.

applicable nonattainment SIP requirements are found in part D, subpart 1, and the particulate matter-specific SIP requirements are found in part D, subpart 4.

The EPA provided guidance on redesignations in a document entitled “State Implementation Plans; General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990,” published in the Federal Register on April 16, 1992 (57 FR 13498), and supplemented on April 28, 1992 (57 FR 18070) (referred to herein as the “General Preamble”). Additional guidance was issued on September 4, 1992, in a memorandum from John Calcagni, Director, Air Quality Management Division, EPA Office of Air Quality Planning and Standards, entitled “Procedures for Processing Requests to Redesignate Areas to Attainment” (referred to herein as the “Calcagni memo”). Maintenance plan submittals are SIP revisions, and as such, the EPA is obligated under CAA section 110(k) to approve them or disapprove them depending upon whether they meet the applicable CAA requirements for such plans.

For reasons set forth in section V. of this document, we propose to approve CARB’s request for redesignation of the Chico nonattainment area to attainment for the 2006 24-hour  $PM_{2.5}$  NAAQS based on our conclusion that all the criteria under CAA section 107(d)(3)(E) have been satisfied.

## **V. Evaluation of the State’s Redesignation Request for the Chico $PM_{2.5}$ Nonattainment Area**

### ***A. Determination that the Area Has Attained the $PM_{2.5}$ NAAQS***

Section 107(d)(3)(E)(i) of the CAA requires that for an area to be redesignated to attainment the EPA must determine that the area has attained the relevant NAAQS. In this case, the relevant NAAQS is the 2006 24-hour  $PM_{2.5}$  NAAQS. In 2013, the EPA determined that the Chico nonattainment area had attained the 2006 24-hour  $PM_{2.5}$  NAAQS based on the 2010-2012

monitoring period. In 2017, the EPA determined that the Chico nonattainment area attained the 2006 24-hour PM<sub>2.5</sub> NAAQS by the area's applicable attainment date of December 31, 2015, based on data for the years 2013 – 2015.<sup>12</sup> Today's action updates these determinations based on the most recent available PM<sub>2.5</sub> monitoring data.

Generally, the EPA determines whether an area's air quality is meeting the 2006 24-hour PM<sub>2.5</sub> NAAQS based upon complete, quality-assured, and certified data measured at established state and local air monitoring stations (SLAMS) in the nonattainment area and entered into the EPA Air Quality System (AQS) database. The EPA will consider air quality data from air monitoring sites other than SLAMS in the nonattainment area provided those stations meet the federal monitoring requirements for SLAMS, including the quality assurance and quality control criteria in 40 CFR part 58, appendix A.<sup>13</sup>

Data from air monitoring sites operated by state, local, or tribal agencies in compliance with EPA monitoring requirements must be submitted to AQS. These monitoring agencies certify annually that these data are accurate to the best of their knowledge. Accordingly, the EPA relies primarily on data in AQS when determining the attainment status of an area.<sup>14</sup> All valid data are reviewed to determine the area's air quality status in accordance with 40 CFR part 50, appendix N.

As described previously, the 2006 24-hour PM<sub>2.5</sub> NAAQS is met when the design value is less than or equal to 35 µg/m<sup>3</sup>. The PM<sub>2.5</sub> 24-hour average is considered valid when 75 percent

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<sup>12</sup> See Section II.C. of this document.

<sup>13</sup> See 40 CFR 58.20; 71 FR 61236 at 61242 (October 17, 2006).

<sup>14</sup> See 40 CFR 50.13; 40 CFR part 50, appendix L; 40 CFR part 53; 40 CFR part 58; and, 40 CFR part 58, appendices A, C, D, and E.

of the hourly averages for the 24-hour period are available. Data completeness requirements for a given year are met when at least 75 percent of the scheduled sampling days for each quarter have valid data.

The California Air Resources Board is responsible for monitoring ambient air quality within Butte County and operates the PM<sub>2.5</sub> monitoring network in Butte County. CARB submits annual monitoring network plans to the EPA. These network plans describe the monitoring network operated by CARB within Butte County and discuss the status of the air monitoring network, as required under 40 CFR 58.10. The EPA regularly reviews these annual plans for compliance with the applicable reporting requirements in 40 CFR part 58. With respect to PM<sub>2.5</sub>, the EPA has found that the area's network plans meet the applicable reporting requirements under 40 CFR part 58.<sup>15</sup> The EPA also concluded from its 2015 Technical Systems Audit that CARB's monitoring network currently meets or exceeds the requirements for the minimum number of SLAMS for PM<sub>2.5</sub> in the Chico, CA Metropolitan Statistical Area (MSA), which comprises the Chico PM<sub>2.5</sub> nonattainment area.<sup>16</sup> CARB annually certifies that the data it submits to AQS are complete and quality-assured.<sup>17</sup>

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<sup>15</sup> For example, see letter from Gwen Yoshimura, Manager, Air Quality Analysis Office, EPA Region IX, to Ravi Ramalingam, Chief, Consumer Products and Air Quality Assessment Branch, CARB, dated December 14, 2017, approving CARB's 2017 Annual Network Plan.

<sup>16</sup> EPA Region IX, Technical System Audit Final Report, CARB Ambient Air Monitoring Program, April – August 2015. Enclosed with letter from Elizabeth Adams, Acting Director, Air Division, EPA Region IX, to Richard Corey, Executive Officer, CARB, dated August 31, 2016.

<sup>17</sup> For example, see letter from Ravi Ramalingam, Chief, Consumer Products and Air Quality Assessment Branch, CARB, to Elizabeth Adams, Acting Director, Air Division, EPA Region IX, certifying calendar year 2016 ambient air quality data and quality assurance data, dated June 2, 2017.

During the 2014 – 2016 period, CARB operated one PM<sub>2.5</sub> SLAMS monitoring site, Chico-East Avenue (AQS ID: 06-007-0008), within the Chico PM<sub>2.5</sub> nonattainment area. SLAMS produce data comparable to the NAAQS, and therefore, the monitor must be an approved Federal Reference Method (FRM), Federal Equivalent Method, or Approved Regional Method. The Chico-East Avenue monitor measures PM<sub>2.5</sub> concentrations on a daily, year-round basis using a method that has been designated an FRM by the EPA. Butte County also had two additional monitoring sites operated by CARB during this period, Gridley (AQS ID: 06-007-4001) and Paradise-Theater (06-007-2002), whose data are not comparable to the NAAQS and cannot be used for attainment demonstration purposes. CARB continues to meet EPA requirements for the minimum number of PM<sub>2.5</sub> monitoring sites in Butte County within the Chico MSA.

Consistent with the requirements contained in 40 CFR part 50, the EPA has reviewed the quality-assured and certified PM<sub>2.5</sub> ambient air monitoring data collected at the Chico-East Avenue monitoring site, as recorded in AQS, for the applicable monitoring period. We have determined that the data are of sufficient completeness for the purposes of making comparisons with the 2006 24-hour PM<sub>2.5</sub> NAAQS. The EPA's evaluation of whether the Chico PM<sub>2.5</sub> nonattainment area has attained the 2006 24-hour PM<sub>2.5</sub> NAAQS is based on our review of the monitoring data and takes into account the adequacy of the PM<sub>2.5</sub> monitoring network in the nonattainment area and the reliability of the data collected by the network as discussed earlier in this section of this document.

Table 1 below shows the 24-hour PM<sub>2.5</sub> design value monitored at the Chico-East Avenue monitoring site over the most recent three-year period (2014-2016). The data show that the 24-hour design value for the 2014-2016 period was equal to or less than 35 µg/m<sup>3</sup> at the

Chico-East Avenue monitor. Therefore, we find that, based on complete, quality-assured, and certified data for 2014-2016, the Chico PM<sub>2.5</sub> nonattainment area has attained the 2006 24-hour PM<sub>2.5</sub> NAAQS. Preliminary data available in AQS for 2017 indicate that the area continues to attain the 2006 24-hour PM<sub>2.5</sub> NAAQS.

Table 1. Chico-East Avenue 2014 – 2016 Design Value						
Monitoring Site	AQS ID	2006 24-Hour PM <sub>2.5</sub> NAAQS (µg/m <sup>3</sup> )	98 <sup>th</sup> Percentile (µg/m <sup>3</sup> )			2014 – 2016 24-Hour Design Value (µg/m <sup>3</sup> )
			2014	2015	2016	
Chico-East Avenue	06-007-0008	35	26.0	29.5	21.2	26

Source: EPA, AQS Design Value Report, March 29, 2018.

*B. The Area Must Have a Fully Approved SIP Meeting the Requirements Applicable for Purposes of Redesignation Under Section 110 and Part D*

Sections 107(d)(3)(E)(ii) and (v) require the EPA to determine that the area has a fully approved applicable SIP under section 110(k) that meets all applicable requirements under section 110 and part D for the purposes of redesignation.

1. Basic SIP Requirements under Section 110

The general SIP elements and requirements set forth in section 110(a)(2) include, but are not limited to, the following: submittal of a SIP that has been adopted by the state after reasonable public notice and hearing; provisions for establishment and operation of appropriate procedures needed to monitor ambient air quality; implementation of a source permitting program; provision for the implementation of part C requirements for prevention of significant deterioration; provisions for the implementation of part D requirements for nonattainment new source review permit programs; provisions for air pollution modeling; and provisions for public and local agency participation in planning and emission control rule development.



We note that SIPs must be fully approved only with respect to applicable requirements for purposes of redesignation in accordance with section 107(d)(3)(E)(ii). The section 110(a)(2) (and part D) requirements that are linked to a particular nonattainment area's designation and classification are the relevant measures to evaluate in reviewing a redesignation request. Requirements that apply regardless of the designation of any particular area of a state are not applicable requirements for the purposes of redesignation, and the State will remain subject to these requirements after the Chico PM<sub>2.5</sub> nonattainment area is redesignated to attainment.

For example, CAA section 110(a)(2)(D) requires that SIPs contain certain measures to prevent sources in a state from significantly contributing to air quality problems in another state: these SIPs are often referred to as "transport SIPs." Because the section 110(a)(2)(D) requirements for transport SIPs are not linked to a particular nonattainment area's designation and classification, but rather apply regardless of the area's attainment status, these are not applicable requirements for the purposes of redesignation under section 107(d)(3)(E).

Similarly, the EPA believes that other section 110(a)(2) (and part D) requirements that are not linked to nonattainment plan submissions or to an area's attainment status are not applicable requirements for purposes of redesignation. The EPA believes that the section 110 (and part D) requirements that relate to a particular nonattainment area's designation and classification are the relevant measures to evaluate in reviewing a redesignation request. This

view is consistent with the EPA's existing policy on applicability of the conformity SIP requirement for redesignations.<sup>18</sup>

On numerous occasions, CARB and BCAQMD have submitted and we have approved provisions addressing the basic CAA section 110 provisions. The Butte County portion of the California SIP<sup>19</sup> contains enforceable emission limitations; requires monitoring, compiling and analyzing of ambient air quality data; requires preconstruction review of new or modified stationary sources; provides for adequate funding, staff, and associated resources necessary to implement its requirements; and provides the necessary assurances that the State maintains responsibility for ensuring that the CAA requirements are satisfied in the event that Butte County is unable to meet its CAA obligations. There are no outstanding or disapproved applicable SIP submittals with respect to the Butte County portion of the SIP that prevent redesignation of the Chico PM<sub>2.5</sub> nonattainment area for the 24-hour PM<sub>2.5</sub> standard. Therefore, we propose to conclude that CARB and BCAQMD have met all general SIP requirements for Chico that are applicable for purposes of redesignation under section 110 of the CAA.

## 2. SIP Requirements Under Part D

Subparts 1 and 4 of part D, title 1 of the CAA contain air quality planning requirements for PM<sub>2.5</sub> nonattainment areas. Subpart 1 contains general requirements for all nonattainment areas of any pollutant, including PM<sub>2.5</sub>, governed by a NAAQS. The subpart 1 requirements include, among other things, provisions for RACM, RFP, emissions inventories, contingency

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<sup>18</sup> See, e.g., 75 FR 36023 at 36026 (June 24, 2010).

<sup>19</sup> The Butte County portion of the federally approved SIP can be viewed at <https://www.epa.gov/sips-ca/epa-approved-butte-county-air-district-regulations-california-sip>.

measures, and conformity. Subpart 4 contains specific planning and scheduling requirements for PM<sub>2.5</sub> nonattainment areas. Section 189(a), (c), and (e) requirements apply specifically to moderate PM<sub>2.5</sub> nonattainment areas and include: an approved permit program for construction of new and modified major stationary sources; provisions for RACM; an attainment demonstration; quantitative milestones demonstrating RFP toward attainment by the applicable attainment date; and provisions to ensure that the control requirements applicable to major stationary sources of PM<sub>2.5</sub> also apply to major stationary sources of PM<sub>2.5</sub> precursors, except where the Administrator has determined that such sources do not contribute significantly to PM<sub>2.5</sub> levels that exceed the NAAQS in the area.

As noted in Section II.C. of this document, the EPA determined in 2013 that the Chico PM<sub>2.5</sub> nonattainment area attained the 24-hour PM<sub>2.5</sub> NAAQS based on 2010 – 2012 data. In accordance with the EPA’s Clean Data Policy, we determined that the following requirements do not apply to the Chico PM<sub>2.5</sub> nonattainment area for so long as the area continues to attain the PM<sub>2.5</sub> standard or until the area is redesignated to attainment: an attainment demonstration under section 189(a)(1)(B); RACM provisions under sections 172(c) and 189(a)(1)(C); reasonable further progress provisions under section 189(c)(1); and contingency measures under section 172(c)(9).<sup>20</sup>

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<sup>20</sup> The EPA’s Clean Data Policy for PM<sub>2.5</sub> nonattainment areas is set forth in a memorandum entitled “Clean Data Policy for the Fine Particle National Ambient Air Quality Standards,” issued on December 14, 2004, by Stephen D. Page, Director, EPA Office of Air Quality Planning and Standards. For examples of other rulemaking actions applying the Clean Data Policy in PM<sub>2.5</sub> nonattainment areas, see 78 FR 41901, July 12, 2013 (West Central Pinal, Arizona); 80 FR 22666, April 23, 2015 (Liberty-Clairton, Pennsylvania); and 82 FR 13392, March 13, 2017 (Imperial County, California). The PM<sub>2.5</sub> SIP Requirements Rule includes a discussion of EPA’s Clean Data Policy (81 FR 58010 at 58127) and codifies the Clean Data Policy governing the implementation of current and future PM<sub>2.5</sub> NAAQS at 40 CFR 51.1015.

Moreover, in the context of evaluating an area's eligibility for redesignation, there is a separate and additional justification for finding that requirements associated with attainment are not applicable for purposes of redesignation. Prior to and independently of the Clean Data Policy,<sup>21</sup> and specifically in the context of redesignations, the EPA interpreted attainment-linked requirements as not applicable for purposes of redesignation. In the General Preamble, the EPA explained that the section 172(c)(9) requirements are directed at ensuring RFP and attainment by the applicable date. We noted that these requirements no longer apply when an area has attained the standard and is eligible for redesignation. Furthermore, CAA section 175A for maintenance plans provides specific requirements for contingency measures that effectively supersede the requirements of section 172(c)(9) for these areas.

Thus, even if the requirements associated with attainment had not previously been suspended, they would not apply for purposes of evaluating whether an area that has attained the standard qualifies for redesignation. The EPA has enunciated this position since the General Preamble was published more than 25 years ago, and it represents the Agency's interpretation of what constitutes applicable requirements under section 107(d)(3)(E). The courts have recognized the scope of the EPA's authority to interpret "applicable requirements" in the redesignation context.<sup>22</sup>

The remaining applicable Part D requirements for moderate PM<sub>2.5</sub> areas are: (1) an emission inventory under section 172(c)(3); (2) a permit program for the construction and

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<sup>21</sup> The Calcagni memo states that the requirements for reasonable further progress and other measures needed for attainment will not apply for redesignations because they only have meaning for areas not attaining the standard (p. 6).

<sup>22</sup> See *Sierra Club v. EPA*, 375 F.3d 537 (7th Cir. 2004).

operation of new and modified major stationary sources of PM<sub>2.5</sub> under sections 172(c)(5) and 189(a)(1)(A); (3) control requirements for major stationary sources of PM<sub>2.5</sub> precursors under section 189(e), except where the Administrator determines that such sources do not contribute significantly to PM<sub>2.5</sub> levels that exceed the standard in the area; (4) requirements under section 172(c)(7) that meet the applicable provisions of section 110(a)(2); and (5) provisions to ensure that federally supported or funded projects conform to the air quality planning goals in the applicable SIP under section 176(c).

The Chico redesignation request substantively meets the Part D requirements for redesignation purposes. We discuss each of these requirements below.

a. Emissions Inventory

Section 172(c)(3) of the CAA requires states to submit a comprehensive, accurate, current inventory of relevant PM<sub>2.5</sub> pollutants for the baseline year from all sources within the nonattainment area. The inventory must address direct and secondary PM<sub>2.5</sub> emissions, and all stationary (generally referring to larger stationary source or “point” sources), area (generally referring to smaller stationary and fugitive sources), and mobile (on-road, non-road, locomotive and aircraft) sources are to be included in the inventory.

On November 15, 2012, CARB submitted a SIP revision for the Chico nonattainment area that provided a 2011 winter-time emissions inventory with emissions estimates in tons per day (tpd) for PM<sub>2.5</sub> and PM<sub>2.5</sub> precursors.<sup>23</sup> After reviewing the CARB submittal of the Chico emissions inventory and supporting documentation, the EPA determined that the emissions

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<sup>23</sup> Monitoring data for the Chico nonattainment area indicate that high concentrations of PM<sub>2.5</sub> occur primarily during the winter months; consequently, the District submitted a winter-season inventory.

inventory met the requirements of the CAA and EPA guidance and approved it consistent with CAA sections 110 and 172(c)(3) (79 FR 14404, March 14, 2014).

b. Permits for New and Modified Major Stationary Sources

CAA sections 172(c)(5) and 189(a)(1)(A) require that states submit SIP revisions that establish certain requirements for new or modified stationary sources in nonattainment areas, including provisions to ensure that new major sources or major modifications of existing sources of nonattainment pollutants incorporate the highest level of control, referred to as the lowest achievable emission rate, and that increases in emissions from such stationary sources are offset so as to provide for reasonable further progress towards attainment in the nonattainment area.

The process for reviewing permit applications and issuing permits for new or modified major stationary sources of air pollution is referred to as new source review (NSR). With respect to nonattainment pollutants in nonattainment areas, this process is referred to as nonattainment NSR (NNSR). Areas that are designated as attainment or unclassifiable for one or more NAAQS are required to submit SIP revisions that ensure that major new stationary sources or major modifications of existing stationary sources meet the federal requirements for prevention of significant deterioration (PSD), including application of best available control technology for each applicable pollutant emitted in significant amounts, among other requirements.<sup>24</sup>

The District is responsible for stationary source emissions units, and its regulations govern air permits issued for such units. Although BCAQMD does not have a fully approved

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<sup>24</sup> PSD requirements control the growth of new source emissions in areas designated as attainment for a NAAQS.

NNSR rule,<sup>25</sup> it does not affect EPA approval of the redesignation request because the maintenance demonstration does not rely on implementation of NNSR<sup>26</sup> and upon redesignation the nonattainment permitting program requirements shift to the PSD permitting program requirements under 40 CFR 51.166.

The District has a SIP-approved PSD program (Rule 1107) that will apply to PM<sub>2.5</sub> and PM<sub>2.5</sub> precursor emissions from new major sources or major modifications upon redesignation of the area to attainment.<sup>27</sup> Thus, new major sources with significant PM<sub>2.5</sub> emissions and major modifications of PM<sub>2.5</sub> at major sources as defined under 40 CFR 51.166 will be required to obtain a PSD permit or address PM<sub>2.5</sub> emissions in their existing PSD permit. Further, the maintenance demonstration does not rely on implementation of NNSR because the Plan applies standard growth factors to stationary source emissions and does not rely on NSR offsets to reduce the rate of increase in emissions over time from point sources. In addition, the Chico PM<sub>2.5</sub> Plan adds emission reduction credits (ERCs) for PM<sub>10</sub>,<sup>28</sup> NO<sub>x</sub>, SO<sub>x</sub>, and reactive organic

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<sup>25</sup> The EPA partially approved and partially disapproved BCAQMD's nonattainment NSR rule (Rule 432) because ammonia was not listed as a PM<sub>2.5</sub> precursor (81 FR 93820, December 22, 2016). On June 12, 2017, the District submitted a revised rule to correct this deficiency. The EPA proposed to approve the revised rule on March 23, 2018 (83 FR 12694).

<sup>26</sup> Because PSD requirements will apply after redesignation, an area being redesignated to attainment need not comply with the requirement that a nonattainment NSR program be approved prior to redesignation, providing the state demonstrates maintenance of the NAAQS in the area without implementation of nonattainment NSR. A more detailed rationale for this view is described in a memorandum from Mary Nichols, Assistant Administrator for Air and Radiation, dated October 14, 1994, titled "Part D New Source Review Requirements for Areas Requesting Redesignation to Attainment." *See also* redesignation rulemakings for Detroit, Michigan (60 FR 12459, March 7, 1995); Cleveland-Akron-Lorain, Ohio (61 FR 20458, May 7, 1996); Louisville, Kentucky (66 FR 53665, October 23, 2001); Grand Rapids, Michigan (61 FR 31831, June 21, 1996); and Yuba City-Marysville, California (79 FR 61822, October 15, 2014).

<sup>27</sup> Rule 1107 was approved on November 12, 2015 (80 FR 69880).

<sup>28</sup> BCAQMD issues ERCs for PM<sub>10</sub>. When creating the future year inventories for the maintenance demonstration, the District added the amount of PM<sub>10</sub> ERCs to the future year inventories of PM<sub>2.5</sub>. Because PM<sub>2.5</sub> is a fraction of

gasses (ROG)<sup>29</sup> to future projected emissions to ensure that the use of ERCs will not be inconsistent with the future PM<sub>2.5</sub> maintenance goals. Therefore, the EPA concludes that a fully-approved nonattainment NSR program is not necessary for approval of the State's redesignation request for the Chico PM<sub>2.5</sub> nonattainment area.

We conclude that Butte County's portion of the California SIP adequately meets the requirements of section 172(c)(5) and 189(a)(1)(A) for purposes of this redesignation.

#### c. Control Requirements for PM<sub>2.5</sub> Precursors

CAA section 189(e) provides that control requirements for major stationary sources of direct PM<sub>10</sub> (including PM<sub>2.5</sub>) shall also apply to PM precursors from those sources, except where the EPA determines that major stationary sources of such precursors do not contribute significantly to PM<sub>10</sub> levels that exceed the standard in the area. The CAA does not explicitly address whether it would be appropriate to include a potential exemption from precursor controls for all source categories under certain circumstances. In implementing subpart 4 with regard to controlling PM<sub>10</sub>, the EPA permitted states to determine that a precursor was "insignificant" where the state could show in its attainment plan that it would expeditiously attain without adoption of emission reduction measures aimed at that precursor. This approach was upheld in *Association of Irrigated Residents v. EPA*, 423 F.3d 989 (9<sup>th</sup> Cir. 2005) and extended to PM<sub>2.5</sub> implementation in the PM<sub>2.5</sub> SIP Requirements Rule. A state may develop its attainment plan and

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PM<sub>10</sub>, this approach conservatively estimates the maximum pollutant increase if all ERCs were redeemed within the BCAQMD during the maintenance period. Plan, p. 18 and Attachment D.

<sup>29</sup> California plans sometimes use the term Reactive Organic Gases (ROG) for VOC. These terms are essentially synonymous.



adopt RACM that target only those precursors that are necessary to control for purposes of timely attainment. *See* 81 FR 58010 at 58020.

Therefore, because the requirement of section 189(e) is primarily actionable in the context of addressing precursors in an attainment plan, a precursor exemption analysis under section 189(e) and the EPA's implementing regulations is not an applicable requirement that needs to be fully approved in the context of a redesignation under CAA section 107(d)(3)(E)(ii). As discussed above, for areas that are attaining the standard, the EPA does not interpret attainment planning requirements of subparts 1 and 4 to be applicable requirements for the purposes of redesignating an area to attainment.

As previously noted, the EPA determined in 2013 that the Chico PM<sub>2.5</sub> nonattainment area had attained the 2006 24-hour PM<sub>2.5</sub> NAAQS, and in 2017 affirmed that the area had attained the NAAQS by the statutory attainment date. The Chico area has expeditiously attained the 2006 24-hour PM<sub>2.5</sub> NAAQS, and therefore, no additional controls of any pollutant, including any PM<sub>2.5</sub> precursor, are necessary to bring the area into attainment. In Section V.A. of this document, we find that the area continues to attain the NAAQS. In section V.C. of this document, the EPA is proposing to determine that the Chico PM<sub>2.5</sub> nonattainment area has attained the standard due to permanent and enforceable emissions reductions. Further, as set forth in section V.D. of this document, we believe that the Plan demonstrates continued maintenance of the 2006 24-hour PM<sub>2.5</sub> standard through 2030. Taken together, these factors support our conclusion that PM<sub>2.5</sub> precursors are adequately controlled.

d. Compliance with Section 110(a)(2)

Section 172(c)(7) requires the SIP to meet the applicable provisions of section 110(a)(2). As described in section V.B. of this document , we conclude the California SIP meets the requirements of section 110(a)(2) applicable for purposes of this redesignation.

e. General and Transportation Conformity Requirements

Under section 176(c) of the CAA, states are required to establish criteria and procedures to ensure that federally supported or funded projects conform to the air quality planning goals in the applicable SIP. Section 176(c) further provides that state conformity provisions must be consistent with federal conformity regulations that the CAA requires the EPA to promulgate. The EPA’s conformity regulations are codified at 40 CFR part 93, subparts A (referred to herein as “transportation conformity”) and B (referred to herein as “general conformity”). Transportation conformity applies to transportation plans, programs, and projects developed, funded, and approved under title 23 U.S.C. or the Federal Transit Act, and general conformity applies to all other federally-supported or funded projects. SIP revisions intended to address the conformity requirements are referred to herein as “conformity SIPs.” The EPA believes it is reasonable to interpret the conformity SIP requirements as not applying for purposes of a redesignation request under section 107(d) because state conformity rules are still required after redesignation and federal conformity rules apply where state rules have not been approved. *See Wall v. EPA*, 265 F. 3d 426 (6th Cir. 2001), upholding this interpretation.<sup>30</sup>

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<sup>30</sup> *See, e.g.*, 60 FR 62748 (December 7, 1995).

*C. The Area Must Show the Improvement in Air Quality is Due to Permanent and Enforceable Emission Reductions*

In order to approve a redesignation to attainment, section 107(d)(3)(E)(iii) of the CAA requires the EPA to determine that the improvement in air quality is due to emission reductions that are permanent and enforceable, and that the improvement results from the implementation of the applicable SIP and applicable federal air pollution control regulations and other permanent and enforceable regulations. Under this criterion, a state must be able to reasonably attribute the improvement in air quality to emissions reductions that are permanent and enforceable.

Attainment resulting from temporary reductions in emission rates (e.g., reduced production or shutdown due to temporary adverse economic conditions) or unusually favorable meteorology would not qualify as an air quality improvement due to permanent and enforceable emission reductions (Calcagni memo, p. 4).

In its demonstration that improvements in air quality are reasonably attributable to emissions reductions that are permanent and enforceable, BCAQMD evaluated several factors: the composition of PM<sub>2.5</sub> in the nonattainment area; control measures that have been implemented since the area was redesignated to nonattainment; changes to the emissions inventory over time; and meteorological and economic trends. Based on these factors, the District concluded that permanent and enforceable reductions in emissions from residential wood burning and mobile sources provided the greatest emissions reductions (Plan, Section 3.c.).

Using chemical composition data from speciation samplers located at the Chico monitoring site, the District calculated the average contribution of different components to the PM<sub>2.5</sub> design value on the 10 percent of days with highest monitored concentrations of PM<sub>2.5</sub> for 2014 – 2016.<sup>31</sup> Total carbonaceous mass, which is linked to smoke from residential wood burning stoves and fireplaces, contributed 76 percent (19.84 µg/m<sup>3</sup>) of the 26 µg/m<sup>3</sup> design value. The second largest fraction is ammonium nitrate, formed from precursor emissions of NO<sub>x</sub> and ammonia, which accounted for 16 percent of the total (4.07 µg/m<sup>3</sup>). Other contributors (*i.e.*, ammonium sulfate, formed from precursor emissions of SO<sub>x</sub> and ammonia – 4 percent, geological materials – 2 percent, and elements – 2 percent) account for a much smaller portion of the ambient PM<sub>2.5</sub> (Plan, Section 4.a. and Attachment F). As described in our analysis of the District’s maintenance demonstration,<sup>32</sup> the Plan makes the case that residential wood burning is the primary contributor to the air quality problem in the Chico nonattainment area and that secondary PM<sub>2.5</sub> (ammonium nitrate and ammonium sulfate), geological materials, and elements are relatively small contributors.

The Chico PM<sub>2.5</sub> Plan credits control measures adopted and implemented by BCAQMD and CARB and approved into the SIP by the EPA as reducing emissions to attain the 2006 24-hour PM<sub>2.5</sub> NAAQS. The District has jurisdiction over air quality planning requirements for the Chico nonattainment area and is largely responsible for the regulation of stationary sources and most area sources. Table 2 lists BCAQMD rules adopted and SIP-approved since the area’s

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<sup>31</sup> This matches the three years used to derive the 2016 design value.

<sup>32</sup> Section V.D.2., of this document.

PM<sub>2.5</sub> nonattainment designation that contribute towards attainment and maintenance of the 2006 24-hour PM<sub>2.5</sub> NAAQS.

Table 2. BCAQMD SIP-Approved Control Measures and Programs Contributing Towards Attainment and Maintenance of the 2006 24-Hour PM <sub>2.5</sub> NAAQS			
Rule	Title	Adoption or Amendment Date	Status
207	Wood Burning Devices	Amended December 11, 2008	EPA approved - 78 FR 21540
300	Open Burning Requirements, Prohibitions, and Exemptions <sup>a</sup>	Amended December 9, 2010, February 24, 2011, and August 27, 2015	EPA approved - 81 FR 70018
400	Permit Requirements	Amended May 26, 2011 and April 24, 2014	EPA approved 81 FR 93820
401	Permit Exemptions	Amended May 26, 2011 and April 24, 2014	EPA approved 81 FR 93820
432	Federal New Source Review	Adopted May 26, 2011, Amended April 24, 2014 and March 23, 2017	81 FR 93820 (limited approval/limited disapproval) 83 FR 12694 (proposed approval)
433	Rice Straw Emission Reduction Credits	Amended April 24, 2014	EPA approved - 83 FR 17380
1107	Prevention of Significant Deterioration	Adopted June 28, 2012	EPA approved - 80 FR 69880

Source: Plan, Table 3-2.

<sup>a</sup> BCAQMD participates in the State's Sacramento Valley Air Basin Smoke Management Program (Plan, p. 11). The program describes the policies and procedures used with hourly and daily measurements of air quality and meteorology to determine how much open biomass burning can be allowed in the Sacramento Valley Air Basin. The program ensures that agricultural burning is prohibited on days meteorologically conducive to potentially elevated PM<sub>10</sub> concentrations. *See* Title 17 California Code of Regulations, Subchapter 2, Section 80100 et. seq. The regulations can be viewed at <http://www.arb.ca.gov/smp/regs/RevFinRegwTOC.pdf>.

The large contribution of wood smoke on days when the ambient concentrations are elevated illustrates the dominance of this source category. BCAQMD managed three woodstove replacement programs between 2005 and 2015. The District calculated that these programs reduced PM<sub>2.5</sub> emissions by 40.5 tons per year (Plan, Attachment C).<sup>33</sup> These reductions were made federally enforceable by SIP approval of Rule 207, which prohibits the installation of non-

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<sup>33</sup> In addition to the woodstove replacement program, BCAQMD has a voluntary wood burning curtailment program. Because reductions from this program are not federally enforceable, the District does not categorize them as permanent and enforceable (Plan, p. 11).

certified wood burning devices in new and existing dwellings. The Plan illustrates the correlation in improvement in air quality with the decline of carbonaceous aerosols, further emphasizing the role that reductions to this category played in attaining the 24-hour PM<sub>2.5</sub> NAAQS. In addition, the District has adopted or strengthened open burning requirements and stationary source rules. Together, these rules have provided and will continue to provide permanent and enforceable emissions reductions that have contributed to the improvement in air quality.

Source categories for which CARB has primary responsibility for reducing emissions in California include most new and existing on- and off-road engines and vehicles, motor vehicle fuels, and consumer products. In addition, California has unique authority under CAA section 209 (subject to a waiver by EPA) to adopt and implement new emission standards for many categories of on-road vehicles and engines, and new and in-use off-road vehicles and engines.

California has been a leader in the development of some of the most stringent control measures nationwide for on-road and off-road mobile sources and the fuels that power them. These standards have reduced new car emissions by 99 percent and new truck emissions by 90 percent from uncontrolled levels.<sup>34</sup> In addition, the State has standards for lawn and garden equipment, recreational vehicles and boats, and other off-road sources that require newly manufactured equipment to be 80-98 percent cleaner than their uncontrolled counterparts.<sup>35</sup> Finally, the State has adopted many measures that focus on achieving reductions from in-use mobile sources that include more stringent inspection and maintenance or “Smog Check”

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<sup>34</sup> See page 37 of the 2007 State Strategy, which was adopted by CARB on September 27, 2007 and submitted to the EPA on November 16, 2007. The 2007 State Strategy and associated documents can be viewed at <https://www.arb.ca.gov/planning/sip/2007sip/2007sip.htm#state>.

<sup>35</sup> *Id.*

requirements and truck and bus idling restrictions. The State's measures have generally been approved by the EPA into the SIP and as such are fully creditable for meeting CAA requirements.<sup>36</sup> While reductions in PM<sub>2.5</sub> emissions from residential wood burning have been the primary driver for improved air quality in the Chico nonattainment area, we note that many of the State measures cited above have provided emissions reductions of PM<sub>2.5</sub> and its precursors since 2006, and thus, some improvement in air quality may reasonably be attributed to them.

Finally, in addition to the local district and State rules discussed above, the Chico PM<sub>2.5</sub> nonattainment area has also benefitted from emission reductions from federal measures. These federal measures include the EPA's national emissions standards for heavy-duty diesel trucks, certain emissions standards for new construction and farm equipment (*i.e.*, Tier 2 and 3 non-road engines standards, and Tier 4 diesel non-road engine standards), locomotive engine standards and motor vehicle (Tier 3) standards.<sup>37</sup> These on-road and off-road vehicle and engine standards, along with State measures cited above, have contributed to improved air quality through the gradual, continued turnover and replacement of older vehicle models with newer models manufactured to meet increasingly stringent emissions standards.

Wintertime emissions of the two largest contributors to ambient PM<sub>2.5</sub> concentrations (*i.e.*, direct PM<sub>2.5</sub> and NO<sub>x</sub> in the form of ammonium nitrate) declined significantly between 2006 and 2015. In 2006, wintertime PM<sub>2.5</sub> emissions in the Chico PM<sub>2.5</sub> nonattainment area were estimated to be approximately 6 tpd. By 2015, total emissions of PM<sub>2.5</sub> had declined 12 percent

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<sup>36</sup> A list of SIP-approved state measures is available at <https://www.epa.gov/sips-ca/epa-approved-regulations-california-sip>.

<sup>37</sup> See 66 FR 5001 (January 18, 2001), 63 FR 56968 (October 23, 1998), 69 FR 38958 (June 29, 2004), 63 FR 18978 (April 16, 1998), 73 FR 37096 (June 30, 2008), and 79 FR 23414 (April 28, 2014).

to 5.3 tpd. These reductions were largely attributable to reductions in emissions from residential fuel combustion and mobile sources. Over the same period, NO<sub>x</sub> emissions declined from 22.5 tpd to 13 tpd. This 41 percent reduction in NO<sub>x</sub> emissions came primarily from the mobile source category and, to a lesser extent, from stationary sources.<sup>38</sup>

The Plan demonstrates that the air quality improvement in the Chico PM<sub>2.5</sub> nonattainment area between 2006 and 2015 was not the result of a local economic downturn or unusual or extreme weather patterns. As illustrated by Figure 3-9 of the Plan, the gross domestic product of the Chico Metropolitan Statistical Area has increased continuously since 2008, while at the same time, ambient levels of PM<sub>2.5</sub> were improving. The area has continued to attain the PM<sub>2.5</sub> NAAQS under conditions that were both colder and warmer, and both drier and wetter than average, supporting the conclusion that attainment of the standard is not the result of unusual meteorological conditions (Plan, Figures 3-7 and 3-8).

We find that the improvement in air quality in the Chico PM<sub>2.5</sub> nonattainment area is the result of permanent and enforceable emissions reductions from a combination of EPA-approved local and State control measures and federal control measures. As such, we propose to find that the criterion for redesignation set forth at CAA section 107(d)(3)(E)(iii) is satisfied.

#### *D. The Area Must Have a Fully Approved Maintenance Plan Under Section 175A*

Section 175A of the CAA sets forth the required elements of a maintenance plan for areas seeking redesignation from nonattainment to attainment. Under section 175A, the plan must demonstrate continued attainment of the applicable NAAQS for at least 10 years after the

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<sup>38</sup> Plan, Table 3-3 and Attachment D.



Administrator approves a redesignation to attainment. Eight years after redesignation, the State must submit a revised maintenance plan that demonstrates continued attainment for the subsequent ten-year period following the initial ten-year maintenance period. To address the possibility of future NAAQS violations, the maintenance plan must contain such contingency provisions as the EPA deems necessary to promptly correct any violation of the NAAQS that occurs after redesignation of the area. The Calcagni memo provides further guidance on the content of a maintenance plan, explaining that a maintenance plan should include an attainment emissions inventory, maintenance demonstration, monitoring and verification of continued attainment, and a contingency plan. Based on our review and evaluation of the Plan, as detailed below, we are proposing to approve the Chico PM<sub>2.5</sub> Plan because we believe that it meets the requirements of CAA section 175A.

#### 1. Attainment Inventory

In demonstrating maintenance in accordance with CAA section 175A and the Calcagni memo, a state should provide an attainment year emissions inventory to identify the level of emissions in the area sufficient to attain the NAAQS.<sup>39</sup> Where a state has made an adequate demonstration that air quality has improved as a result of the SIP, the attainment inventory will generally be an inventory of actual emissions at the time the area attained the standard. The

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<sup>39</sup> A maintenance plan for the 2006 24-hour PM<sub>2.5</sub> NAAQS must include an inventory of emissions of directly emitted PM<sub>2.5</sub> and its precursors: NO<sub>x</sub>, SO<sub>2</sub>, VOCs, and NH<sub>3</sub>. 40 CFR 51.1008. Consistent with CARB's usual practice, the Plan provides an inventory of ROG rather than VOC. ROG has a slightly broader group of compounds than those identified in the EPA's VOC list and is acceptable for use by the District.

inventory must also be comprehensive, including emissions from stationary point sources, area sources, and mobile sources.

Section 175A requires a state seeking redesignation to attainment to submit a SIP revision to provide for the maintenance of the NAAQS for a period of at least ten years following redesignation. This can be shown either by demonstrating that future emissions of a pollutant and its precursors will not exceed the level of the attainment inventory or by conducting modeling that shows the future emissions will not cause a violation of the standard. In accordance with EPA guidance, the state should project emissions for the 10-year period following redesignation, for either purpose (Calcagni memo, p. 9). Projected emissions inventories for future years must account for, among other things, the ongoing effects of economic growth and adopted emissions control requirements, and the inventories are expected to be the best available representation of future emissions. The plan submission should include documentation explaining how the state calculated the emissions data for the base year and projected inventories.

The specific PM<sub>2.5</sub> emissions inventory requirements are set forth in the Air Emissions Reporting Rule (40 CFR 51, subpart A) and in 40 CFR 51.1008. The EPA has provided additional guidance for developing PM<sub>2.5</sub> emissions inventories in *Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations* (July 2017) (“EPA 2017 EI Guidance”).<sup>40</sup>

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<sup>40</sup> This document is available at [https://www.epa.gov/sites/production/files/2017-07/documents/ei\\_guidance\\_may\\_2017\\_final\\_rev.pdf](https://www.epa.gov/sites/production/files/2017-07/documents/ei_guidance_may_2017_final_rev.pdf).

The emissions inventories are presented in Chapter 4 of the Plan and in Attachment D, Emissions Inventory Data. Additional information regarding the development of the emissions inventories in the Plan was provided by CARB on February 15, 2018.<sup>41</sup>

The Chico PM<sub>2.5</sub> Plan's demonstration that the area has attained the standard is based on monitoring data from 2014 – 2016. The District selected 2015 for the base year inventory, which is consistent with this time period. Monitoring data for the Chico nonattainment area have shown that high PM<sub>2.5</sub> concentrations occur primarily during the winter months; therefore, the Plan's three emissions inventories (the 2015 base year, and the 2025 and 2030 future year inventories) are all winter-season inventories. All three inventories have been projected from actual 2012 inventories.

*a. 2015 Base Year Emissions Inventory*

The 2015 base year inventory provides the foundation for demonstrating maintenance for a 10-year period. A summary of the 2015 winter episode average-season-day emissions inventory for the Chico PM<sub>2.5</sub> nonattainment area is listed in Table 3 and is shown in tons per day (tpd).

Table 3. Chico PM <sub>2.5</sub> Nonattainment Area 2015 Base Year Emissions Inventory (tpd) Winter Episode Average-Season-Day					
Source type/category	PM <sub>2.5</sub> <sup>a</sup>	NO <sub>x</sub>	SO <sub>2</sub>	ROG	NH <sub>3</sub>
Stationary	0.560	1.653	0.096	1.973	0.126
Areawide	4.560	1.449	0.145	6.848	3.937
Mobile	0.375	10.121	0.053	4.103	0.165
Benefit of woodstove changeout	-0.238				
Totals	5.257	13.223	0.294	12.924	4.228

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<sup>41</sup> Letter with enclosures from Sylvia Vanderspeck, Chief, Air Quality Planning Branch, CARB, to Gwen Yoshimura, Manager, Air Quality Analysis Section, EPA Region 9.

Source: Plan, Attachment D.

<sup>a</sup> The EPA's 2017 EI Guidance notes that emissions inventories are required to include direct PM<sub>2.5</sub> emissions, separately reported as PM<sub>2.5</sub> filterable and condensable emissions, as applicable. In order to clarify "as applicable," the 2017 EI Guidance provides a list of source types that are expected to include condensable particulate matter (2017 EI Guidance, Table 15). Because the Chico area's air quality problem is largely driven by wood smoke and because there are currently no data available for condensable PM from wood smoke, reporting total direct PM<sub>2.5</sub> is acceptable.

Areawide sources occur over a wide geographic area. Examples of these sources are consumer products, paved and unpaved road dust, fireplaces, farming operations, and prescribed burning. Emissions for these categories are estimated by both CARB and the BCAQMD using various models and methodologies.

The Plan uses the EMFAC (short for Emissions FACTor) model to assess emissions from on-road vehicles. Off-road mobile source emissions are estimated using various models with the back-up model being OFFROAD2007. On-road and off-road models account for the effects of various adopted regulations, technology types, and seasonal conditions on emissions.

Emissions from on-road mobile sources, which include passenger vehicles, buses, and trucks, were estimated using outputs from CARB's EMFAC2014 model.<sup>42</sup> These emission factors were then applied to specific transportation activity data from the 2015 Federal Statewide Transportation Improvement Program (FSTIP).

Emissions from off-road mobile sources, which include cargo handling equipment, pleasure craft, recreational vehicles, and locomotives, were grown from the 2012 emissions inventory.

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<sup>42</sup> The EPA approved EMFAC2014 for use in SIP revisions and transportation conformity at 80 FR 77337 (December 14, 2015).

*b. Projected Emissions Inventories*

Projected inventories are derived by applying expected growth trends for each source category and expected emissions reductions resulting from adopted control measures to the base year inventory. In this instance, emissions projections for 2025 and 2030 were generated by applying growth and control profiles to the 2015 base year inventory. Growth profiles for point and areawide sources are derived from surrogates (*e.g.*, economic activity, fuel usage, population, housing units, etc.) that best reflect the expected growth trends for each specific source category. Growth projections were obtained primarily from government entities with expertise in developing forecasts for specific sectors or econometric models. Control profiles, which account for emission reductions resulting from adopted rules and regulations, are derived from data provided by the regulatory agencies responsible for the affected emission categories. A summary of the Chico PM<sub>2.5</sub> nonattainment area projected winter episode average-season-day emissions inventories for the years 2025 and 2030 is provided in Table 4.

Table 4. 2025 and 2030 Projected CA/Butte County PM <sub>2.5</sub> Nonattainment Area Winter Episode Average-Season-Day Emissions Inventories (tpd)										
Source type/category	PM <sub>2.5</sub>		NO <sub>x</sub>		SO <sub>x</sub>		ROG		NH <sub>3</sub>	
	2025	2030	2025	2030	2025	2030	2025	2030	2025	2030
Stationary	0.652	0.699	1.621	1.662	0.113	0.122	2.086	2.238	0.141	0.147
Areawide	4.597	4.529	1.446	1.450	0.151	0.153	7.374	7.557	4.067	4.113
Mobile	0.255	0.236	4.829	3.809	0.053	0.055	2.379	2.090	0.131	0.130
ERC Bank	0.107	0.107	0.164	0.164	0.008	0.008	0.164	0.164	--	--
Woodstove Changeout	-0.238	-0.238	--	--	--	--	--	--	--	--
Total	5.373	5.333	8.060	7.085	0.325	0.338	12.003	12.049	4.338	4.390

Source: Plan, Attachment F.

The EPA has reviewed the results, procedures, and methodologies for the Chico PM<sub>2.5</sub> nonattainment area emissions inventories. We have determined that the 2015 base year inventory and the 2025 and 2030 projected inventories are based on the most current and accurate

information available to CARB and BCAQMD at the time the Plan and its inventories were being developed. The selection of 2015 for the base year inventory is also appropriate because it is within the 2014 – 2016 period during which the area attained the standard. The inventories comprehensively address all source categories in the Chico PM<sub>2.5</sub> nonattainment area and appropriate procedures were used to develop the inventories. In addition, CARB and BCAQMD developed the 2025 and the 2030 projected inventories based on the 2015 base year inventory and accounted for projected growth and reductions in emissions. We are therefore proposing to approve the 2015 base year emissions inventory and the 2025 and 2030 projected year inventories for the Chico PM<sub>2.5</sub> Nonattainment Area as meeting the requirements of CAA section 175A of the CAA.

## 2. PM<sub>2.5</sub> Maintenance Demonstration

### *a. PM<sub>2.5</sub> Modeling Requirements*

As noted previously, the requirement that maintenance plans must demonstrate attainment of the NAAQS for at least 10 years after the redesignation can be met in one of two ways: by showing that future emissions will not exceed the level of the attainment inventory or by using modeling to show that the future emissions will not cause a violation of the NAAQS. Modeling predicts future ambient concentrations for comparison to the NAAQS, making use of information such as ambient concentrations, meteorology, and current and projected emission inventories, including the effect of control measures in the plan.

The main EPA source of guidance on modeling is the *Guideline on Air Quality Models* (“Guideline”).<sup>43</sup> Section 4.2.3.5 of the Guideline notes that PM<sub>2.5</sub> is a mixture of components: primary (directly emitted) and secondary (chemically formed in the atmosphere from precursor emissions). In its discussion of modeling for PM<sub>2.5</sub> New Source Review,<sup>44</sup> the Guideline refers to the general dispersion modeling requirements located in sections 4.2.1 and 4.2.2 for primary PM<sub>2.5</sub>, and in Section 5.4 for secondary PM<sub>2.5</sub>. The Guideline’s discussion of PM<sub>2.5</sub> SIP attainment demonstrations<sup>45</sup> references Section 5.4 and associated SIP modeling guidance that mainly pertain to photochemical models to handle secondarily formed PM<sub>2.5</sub>.<sup>46</sup> These modeling recommendations address situations that involve a few major point sources emitting primary PM<sub>2.5</sub> (Section 4.2) and situations with a few large sources or many sources of secondary PM<sub>2.5</sub> (Section 5.4).

For areas such as the Chico area that are dominated by primary PM<sub>10</sub> or PM<sub>2.5</sub> emitted by many small dispersed sources such as fugitive dust or residential wood burning, the rollback model has historically been used. In simple rollback, the monitored ambient concentration (net of any unchanging background concentration) is assumed to be proportional to emissions. When emissions are reduced by a given percentage, the concentration is assumed to scale or “roll back” by the same percentage. A variant of this technique is “proportional rollback,” in which rollback

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<sup>43</sup> 40 CFR 51 Appendix W, *Guideline on Air Quality Models*, 82 FR 5182, January 17, 2017; available at <https://www.epa.gov/scram/clean-air-act-permit-modeling-guidance>.

<sup>44</sup> See subsection (b) of the Guideline.

<sup>45</sup> See subsection (c) of the Guideline.

<sup>46</sup> *Modeling Guidance for Demonstrating Attainment of Air Quality Goals for Ozone, PM<sub>2.5</sub>, and Regional Haze*, December 2014 Draft, EPA OAQPS; available at <https://www.epa.gov/scram/state-implementation-plan-sip-attainment-demonstration-guidance>.

is applied to each emission source category individually, then summed in proportion to each source category's ambient contribution. The proportions, or source apportionment, can be estimated using chemically speciated PM<sub>2.5</sub> measurements. This can be done with a receptor model such as the Chemical Mass Balance model or the Positive Matrix Factorization model, which finds the source category contributions that are the best statistical fit to the measured chemical species concentrations, given measured or estimated source species profiles. More simply, in "speciated rollback," rollback is applied to each species or species group separately, then the individual components are summed. Within each species, a source category's contribution is proportional to its share of the corresponding species emission inventory.

For any of the rollback approaches, assumptions must be made about secondary PM<sub>2.5</sub> such as ammonium nitrate and ammonium sulfate, since they do not correspond directly to emission inventory pollutants and because chemical interactions between precursors are not represented in rollback's linear scaling. The secondary components could conservatively be assumed to be part of the unchanging background concentration, or they might be assumed to scale in proportion to their corresponding precursor emissions, *e.g.*, ammonium nitrate in proportion to NO<sub>x</sub> emissions. While these approaches are relatively imprecise in comparison to photochemical grid models, if secondary particulates are a small portion of ambient PM<sub>2.5</sub> in a particular area, the uncertainty in the model results will also be small.

#### *b. Modeling in the Plan*

Because some precursors increase slightly over the 10-year maintenance period, the Chico PM<sub>2.5</sub> Plan uses modeling to demonstrate ongoing maintenance of the standard. The Plan's maintenance demonstration is based on speciated rollback modeling, with concentrations for PM<sub>2.5</sub> species scaled according to changes in corresponding species emission inventory



categories.<sup>47</sup> The Plan shows the chemical composition of PM<sub>2.5</sub> in tables and pie charts, showing concentrations and percentages for five species groups (ammonium nitrate, ammonium sulfate, carbonaceous aerosols, geological, and elements) for the 10 percent of days with the highest monitored 24-hour PM<sub>2.5</sub> concentrations.<sup>48, 49</sup> The species percentages were derived from averages of speciated Chico PM<sub>2.5</sub> monitoring data during 2014 – 2016, which matches the three years used to derive the 2016 design value.

The speciation data show that days with high PM<sub>2.5</sub> concentrations in the Chico nonattainment area are dominated by carbonaceous aerosol, which accounted for 76 percent of the total. The District's attribution of this principally to organic matter from wood burning is corroborated by the close agreement between the concentration trends of carbonaceous aerosol and of potassium, a marker element for wood burning.<sup>50</sup> Wood burning emissions are 85 percent of the total direct PM<sub>2.5</sub> emissions. The Plan states that the highest concentrations occur under stagnant conditions in winter, typically in the evening and early morning hours. The diurnal pattern of concentrations is consistent with this and with increased residential wood burning in the evening hours.<sup>51</sup> The geological and elements species groups each contributed 2 percent to high PM<sub>2.5</sub> levels.

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<sup>47</sup> Plan, Section 4.a. The Plan uses the terms “rollback” and “proportional rollback.” Here and elsewhere, the terms “proportional rollback” and “speciated rollback” are used loosely. These and other rollback variants all assume concentrations are proportional to emissions but vary in how they map emissions to concentrations.

<sup>48</sup> Plan, Figure 4.1, p. 20; Attachment E, table in Figure 4.1, p.1; and Attachment F, Figure 1, p.1.

<sup>49</sup> The “geological” group comprises those species typically found in soil (such as silicon). The “elements” group consists of all species not in other groups.

<sup>50</sup> Plan, p.13.

<sup>51</sup> Plan, p.13, including Figure 3-4, and p.15.

Secondarily formed PM<sub>2.5</sub> in the form of ammonium nitrate and ammonium sulfate respectively comprised 16 percent and 4 percent of PM<sub>2.5</sub> concentrations. These species are formed from precursor emissions of NO<sub>x</sub>, SO<sub>x</sub>, and ammonia.

The instruments and techniques used to measure speciated PM<sub>2.5</sub> do not measure all species, so some adjustments are needed for the total speciated to match the full PM<sub>2.5</sub> mass, as measured with the FRM for PM<sub>2.5</sub>.<sup>52</sup> For the rollback, the Plan mainly used the adjustments followed in the IMPROVE (Interagency Monitoring of Protected Visual Environments) network for each species group.<sup>53</sup> The exception was carbonaceous aerosol or organic matter, which was estimated by mass balance, that is, the total PM<sub>2.5</sub> mass less the mass of all the other species.<sup>54</sup> The concentrations were then scaled so the total matched the 2016 design value of 26 µg/m<sup>3</sup>. This procedure yielded species group concentrations representative of the design value as the starting point for speciated rollback.

Ambient concentrations of PM<sub>2.5</sub> have both a local component and a background component. The local component is generated by emissions from sources located within the nonattainment area. The background component is not attributed to local sources; it consists of PM<sub>2.5</sub> (and its precursors) that is transported into the area by air flowing in from upwind. Since only the local component can be affected by changes in the area's emissions, rollback scales

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<sup>52</sup> For example, carbon and various ions are measured but the oxygen originally chemically bound to them is not. Also, the sampling schedules and averaging procedures differ between the FRM and speciated measurements.

<sup>53</sup> Plan, Table 4.1, p. 21; IMPROVE (Interagency Monitoring of Protected Visual Environments) is a monitoring program managed by EPA and other federal and state agencies, to assess visibility and aerosol conditions including PM<sub>2.5</sub> species, in Class I areas such as National Parks. <http://vista.cira.colostate.edu/Improve/reconstructed-fine-mass/>.

<sup>54</sup> Due to large uncertainties in carbonaceous mass measurements, mass balance is also used in the EPA-recommended SANDWICH approach (Sulfate, Adjusted Nitrate, Derived Water, Inferred Carbonaceous material balance approach), described in EPA draft *Modeling Guidance for Demonstrating Attainment*, section 4.4.4.

concentrations with background concentrations subtracted out (*i.e.*, net of background).

Speciated concentrations from Bliss State Park next to Lake Tahoe were chosen in the Plan as background concentrations that would occur in the airshed in the absence of local anthropogenic emissions. These concentrations were subtracted from Chico concentrations for the corresponding species groups, resulting in local concentrations to be scaled according to emissions changes (“available for rolling”).

To perform the rollback analysis, the species groups must be matched to emission inventory categories that affect those species’ concentrations. Since the highest PM<sub>2.5</sub> concentrations occur during winter months when residential wood burning is greatest, a winter season inventory was used. Five groups of ambient species were mapped to emission inventory categories. The geological (or fugitive dust) component was assumed to be proportional to fugitive dust emissions, including farming operations, construction, road dust, and fugitive wind-blown dust. The sum of the carbonaceous aerosols component and the elements component was assumed to be proportional to the total emissions from all other directly-emitted primary PM<sub>2.5</sub> emissions categories. The ammonium nitrate component was assumed to scale with total NO<sub>x</sub> emissions, and ammonium sulfate with total SO<sub>x</sub> emissions.

The maintenance demonstration base year was 2015, the center of the 2014 – 2016 period upon which the 2016 design value is based. The predicted emission changes between base year 2015 and future year 2030 were used to scale the species components of the 2016 design value. A bank of ERCs is maintained by the District for equipment shutdowns and voluntary controls at permitted sources; these are emissions that are not occurring presently, but potentially could occur in the future if the credits were used by new sources to offset their emissions as part of the NSR permitting process. The ERCs were added to 2030 emissions for each pollutant but not to

2015 emissions. ERCs are not maintained for direct PM<sub>2.5</sub> emissions, so PM<sub>10</sub> ERCs were used. Both of these choices make the 2030 emission estimate conservatively high. The District had a successful wood burning device change out program. As previously noted, between 2005 – 2015, 739 wood stoves were replaced with cleaner-burning devices. The resulting emission reductions were included in both the base and future year emissions, reflecting baseline emission inventory estimates through the maintenance period. No credit was taken for later stove change outs or for the District's *Check Before You Light* voluntary curtailment program, both of which are expected to yield additional emission reductions through 2030.

Fugitive dust emissions for the geological component are projected to increase by 14 percent, mainly due to increased paved road dust, residential building, and road construction,<sup>55</sup> but this component accounts for only 2.3 percent of PM<sub>2.5</sub> concentrations. The sum of all other directly-emitted primary PM<sub>2.5</sub> emissions categories is the largest single component of concentrations; it is expected to decline by only 0.8 percent by 2030. NO<sub>x</sub> emissions, used to scale ammonium nitrate, are expected to fall by some 46 percent; this is mainly due to declining mobile source emissions, which are 80 percent of the NO<sub>x</sub> inventory. SO<sub>x</sub> emissions, used to scale ammonium sulfate, are projected to increase by about 15 percent, mainly due to an increase in stationary source fuel combustion from electricity generation. As noted above, ammonium sulfate is only 4 percent of PM<sub>2.5</sub> concentrations.

The last steps in rollback are summing the emissions-scaled concentrations for the species groups and then adding the background concentrations back in. Considered individually,

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<sup>55</sup> California Air Resources Board, CEPAM - California Emissions Projection Analysis Model, <https://www.arb.ca.gov/app/emsinv/fcemssumcat/fcemssumcat2016.php>, retrieved March 4th, 2018.

projected reductions in NO<sub>x</sub> emissions will yield a 1.83 µg/m<sup>3</sup> reduction to the design value. The decrease in non-dust PM<sub>2.5</sub> accounts for an additional reduction of 0.16 µg/m<sup>3</sup>. Projected increases in ammonium sulfate and fugitive dust emissions are predicted to contribute a 0.18 µg/m<sup>3</sup> increase. The final result of the maintenance demonstration modeling was a decrease of 1.8 µg/m<sup>3</sup> from the 2016 level, resulting in a 2030 design value of 24.2 µg/m<sup>3</sup>, well below the 35 µg/m<sup>3</sup> NAAQS.

*c. EPA Evaluation of the Maintenance Demonstration*

The choice of an appropriate model for the District's maintenance demonstration was informed by particular circumstances of the Chico nonattainment area, most notably the dominance of primary PM<sub>2.5</sub> in ambient concentrations, the dispersed nature of the many sources responsible for it, and the relatively small fraction composed of secondary particulate matter. As discussed in the Plan, organic carbon from wood burning emissions is 76 percent of PM<sub>2.5</sub> on the highest concentration days, and the highest concentrations occur under stagnant winter conditions. The Plan examined meteorology, PM<sub>2.5</sub> emissions, ambient PM<sub>2.5</sub> data, including speciated PM<sub>2.5</sub> monitoring data over the past decade, and how the diurnal PM<sub>2.5</sub> pattern changed over time, to make the case that residential wood burning is the dominant contributor to the air quality problem in the Chico nonattainment area. The key assumption in rollback, *i.e.*, that concentrations are proportional to emissions, is true for these primary PM<sub>2.5</sub> emissions. Current EPA guidance does not mention rollback; however, it also does not fully cover the Chico situation of dominant primary PM<sub>2.5</sub> from many dispersed sources. Instead, it mainly discusses photochemical grid models and dispersion models that are more appropriate for other situations. It would be unreasonable to require the use of a photochemical grid model just to handle the minor secondary particulate component in Chico, given the time and resources involved, the

established nature of the main PM<sub>2.5</sub> problem in the area (wood smoke), and the monitored concentrations that are well below the NAAQS. Nor would a dispersion model be appropriate, given the large number and dispersed distribution of sources, especially since the highest concentrations occur under stagnant conditions, which dispersion models do not handle well. Given that the key air quality problem is already understood, neither photochemical grid models nor dispersion models would provide much information that is not already available from the rollback model. The EPA finds that the use of rollback meets available guidance and is appropriate for the Chico maintenance demonstration.

The EPA also finds that the Plan correctly implemented the calculations needed for rollback, used an appropriate mapping of ambient PM<sub>2.5</sub> components to emission inventory categories, and incorporated a degree of conservatism.

The main drawback to rollback for Chico PM<sub>2.5</sub> is its inherently simple handling of secondary particulates, which, though a minor ambient component in this instance, are not negligible. The assumption that ammonium nitrate and ammonium sulfate scale linearly with NO<sub>x</sub> and SO<sub>x</sub> emissions, respectively, is simple and is consistent with rollback, but may not be fully correct. Even if they do scale in a reasonably linear manner, they might not respond on a one-to-one basis, e.g. a 10 percent NO<sub>x</sub> emission reduction might yield only a 7 percent ambient ammonium nitrate response. As noted above, the decline in NO<sub>x</sub> emissions accounts for much of the predicted 1.8 µg/m<sup>3</sup> decrease in PM<sub>2.5</sub> concentrations between 2015 and 2030. However, ambient concentrations in Chico are far enough below the level of the NAAQS that, even using highly conservative assumptions for secondary particulates, maintenance of the NAAQS is not jeopardized. If ammonium nitrate does not respond at all to the 46 percent NO<sub>x</sub> reduction, but instead remains at its 2016 design value level, and ammonium sulfate does conservatively

respond on a one-to-one basis to the 15 percent SO<sub>x</sub> emission increase of 0.036 tpd, the rollback model predicts a 2030 design value of 26.03 µg/m<sup>3</sup> (starting from 26.00 µg/m<sup>3</sup> in 2015), still well below the NAAQS. Despite the greater ammonium nitrate in the highly conservative assumption described above as compared to the maintenance demonstration in the Plan, the increase in predicted 2030 design value from 24.2 to 26.0 is relatively small because ammonium nitrate is only 16 percent of PM<sub>2.5</sub> concentrations. Therefore, even if the reasonable and straightforward assumptions in the rollback modeling were not fully correct, the maintenance demonstration would still be adequate given how clean the air is in Chico. Consequently, we are proposing to determine that the Chico PM<sub>2.5</sub> Plan adequately demonstrates maintenance of the 2006 24-hour PM<sub>2.5</sub> NAAQS through 2030.

### 3. Verification of Continued Attainment

Under CAA section 175A, a maintenance plan must demonstrate continued attainment of the applicable NAAQS for at least ten years after EPA approves a redesignation to attainment. Eight years after redesignation, the State must submit a revised maintenance plan that demonstrates continued attainment for the subsequent ten-year period following the initial ten-year maintenance period. To address the possibility of future NAAQS violations, the maintenance plan must contain such contingency provisions that EPA deems necessary to promptly correct any violation of the NAAQS that occurs after redesignation of the area. Based on our review and evaluation of the plan, as detailed below, we are proposing to approve the Chico PM<sub>2.5</sub> Plan because we believe that it meets the CAA section 175A requirements for verification of continued attainment.

In demonstrating maintenance, continued attainment of the NAAQS can be verified through operation of an appropriate air quality monitoring network. The Calcagni memo (p. 11)

states that the maintenance plan should contain provisions for continued operation of air quality monitors that will provide such verification. As discussed in section V.A. of this document, PM<sub>2.5</sub> is currently monitored by CARB within the Chico PM<sub>2.5</sub> nonattainment area. In Section 4.c. of the Chico PM<sub>2.5</sub> Plan, the District indicates that CARB intends to maintain an appropriate PM<sub>2.5</sub> monitoring network and review data through the maintenance period and will collaborate with the EPA and stakeholders on any potential changes to the network. The District commits to using ambient data to track the progress of the maintenance plan. We find that the Chico PM<sub>2.5</sub> Plan contains adequate provisions for continued operation of air quality monitors that will provide verification of continued attainment.

In addition, CARB and BCAQMD must inventory emissions sources and report to EPA on a periodic basis under 40 CFR part 51, subpart A (“Air Emissions Reporting Requirements”). These emissions inventory updates will provide a second way to evaluate emissions trends in the area and thereby verify continued attainment of the NAAQS. The District commits to monitoring the emissions inventory for unexpected changes that could affect maintenance of the PM<sub>2.5</sub> NAAQS. We are proposing to determine that these methods are sufficient for verifying continued attainment.

#### 4. Contingency Provisions

Section 175A(d) of the CAA requires that maintenance plans include contingency provisions, as EPA deems necessary, to promptly correct any violations of the NAAQS that occur after redesignation of the area. Such provisions must include a requirement that the state will implement all measures with respect to the control of the air pollutant concerned that were contained in the SIP for the area before redesignation of the area as an attainment area. These contingency provisions are distinguished from those generally required for nonattainment areas



under CAA section 172(c)(9) in that they are not required to be fully-adopted measures that will take effect without further action by the state in order for the maintenance plan to be approved. However, the contingency plan is considered to be an enforceable part of the SIP and should ensure that the contingency measures are adopted expeditiously once they are triggered by a specified event. The maintenance plan should clearly identify the measures to be adopted, a schedule and procedure for adoption and implementation, and a specific timeline for action by the State. As a necessary part of the plan, the State should also identify the specific indicators or triggers that will be used to determine when the contingency measures need to be implemented.

The District has adopted a contingency plan to address possible future PM<sub>2.5</sub> air quality problems. The contingency provisions in the Chico PM<sub>2.5</sub> Plan are contained in Section 4.e. of the Plan. BCAQMD identifies the contingency plan trigger as a violation of the 2006 24-hour PM<sub>2.5</sub> NAAQS. If that should occur, BCAQMD commits to the following steps:

(1) Within 60 days of the trigger, BCAQMD will commence an analysis to determine if the violation was caused by an exceptional event or instrument malfunction, and evaluate meteorological conditions and emissions inventory.

(2) BCAQMD will consult with interested parties, community organizations, and industry to identify and implement, within nine months after the trigger, voluntary and incentive measures to reduce directly emitted PM<sub>2.5</sub> or precursors.

(3) If voluntary and incentive based measures do not bring the area back into attainment 12 months after the contingency plan is triggered, the BCAQMD will propose for adoption and implementation any necessary new rules to the BCAQMD Governing Board within 24 months of the trigger date. The measures that BCAQMD would consider and analyze include but are not limited to those listed in Table 4-6 in the Plan.

Upon our review of the Plan, as summarized above, we find that the contingency provisions of the Chico PM<sub>2.5</sub> Plan clearly identify specific contingency measures, contain tracking and triggering mechanisms to determine when contingency measures are needed, contain a description of the process of recommending and implementing contingency measures, and contain specific timelines for action. Thus, we conclude that the contingency provisions of the Chico PM<sub>2.5</sub> Plan are adequate to ensure prompt correction of a violation and that they comply with section 175A(d) of the CAA. For the reasons set forth above, EPA is proposing to find that the Chico PM<sub>2.5</sub> Plan is consistent with the maintenance plan contingency provision requirements of the CAA and EPA guidance.

#### 5. Transportation and Motor Vehicle Emissions Budgets

Section 176(c) of the CAA requires federal actions in nonattainment and maintenance areas to conform to the SIP's goals of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of the standards. Conformity to the SIP's goals means that such actions will not: (1) cause or contribute to violations of a NAAQS, (2) worsen the severity of an existing violation, or (3) delay timely attainment of any NAAQS or any interim milestone.

Actions involving Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) funding or approval are subject to the EPA's transportation conformity rule, codified at 40 CFR part 93, subpart A. Under this rule, metropolitan planning organizations (MPOs) in nonattainment and maintenance areas coordinate with state and local air quality and transportation agencies, the EPA, FHWA, and FTA to demonstrate that an area's regional transportation plans and transportation improvement programs conform to the applicable SIP. This demonstration is typically done by showing that estimated emissions from existing and

planned highway and transit systems are less than or equal to the motor vehicle emissions budgets (“budgets”) contained in all control strategy SIPs.

Under the CAA, states are required to submit, at various times, control strategy SIPs and maintenance plans in nonattainment areas. These control strategy SIPs and maintenance plans typically set budgets for criteria pollutants and/or their precursors to address pollution from cars and trucks. Budgets are generally established for specific years and specific pollutants or precursors and must reflect the motor vehicle control measures contained in the RFP plan and the attainment or maintenance demonstration. Per 40 CFR part 93, budgets must be established for the last year of the maintenance plan for direct PM<sub>2.5</sub> and PM<sub>2.5</sub> precursors subject to transportation conformity analyses.<sup>56</sup> For motor vehicle emissions budgets to be approvable, they must meet, at a minimum, the EPA's adequacy criteria (40 CFR 93.118(e)(4)).

The Transportation Conformity Rule allows areas to forgo establishment of a budget where it is demonstrated that the regional motor vehicle emissions for a particular pollutant or precursor are an insignificant contributor to the air quality problem in an area. The criteria for insignificance determinations can be found in 40 CFR 93.109(f). In order for a pollutant or precursor to be considered an insignificant contributor, the SIP would have to demonstrate that it would be unreasonable to expect that such an area would experience enough motor vehicle emissions growth in that pollutant/precursor for a NAAQS violation to occur. Insignificance determinations are based on a number of factors, including (1) the current state of air quality as

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<sup>56</sup> Section 93.102(b)(2)(v) of the conformity rule identifies VOC, SO<sub>x</sub>, and ammonia as PM<sub>2.5</sub> precursor pollutants that are presumed insignificant unless the SIP makes a finding that the precursor is significant. In contrast, NO<sub>x</sub> is presumed to be a significant contributor, unless the state and the EPA determine that transportation-related emissions of NO<sub>x</sub> are not a significant contributor (93.102(b)(2)(iv)).

determined by monitoring data for that NAAQS; (2) the absence of SIP motor vehicle control measures; (3) historical trends and future projections of the growth of motor vehicle emissions; and (4) the percentage of motor vehicle emissions in context of the total SIP inventory. The EPA's rationale for providing for insignificance determinations is described in the July 1, 2004, revision to the transportation conformity rule (69 FR 40004). Specifically, the rationale is explained on p. 40061 under the subsection entitled "XXIII. B. Areas With Insignificant Motor Vehicle Emissions."

As part of the Chico PM<sub>2.5</sub> Plan, the BCAQMD requested that the EPA find that on-road emissions of direct PM<sub>2.5</sub> and NO<sub>x</sub> are insignificant for conformity purposes, and therefore the District did not submit any budgets. The EPA is proposing to approve BCAQMD's insignificance demonstration for the on-road motor vehicle contribution of NO<sub>x</sub> and PM<sub>2.5</sub> emissions to the overall PM<sub>2.5</sub> emissions in the maintenance plan.

The information provided by BCAQMD to the EPA as part of the SIP revision addresses each of the factors listed in 40 CFR 93.109(f), and is summarized below. Design values for the area are trending downward from 69 µg/m<sup>3</sup> in 2008, to 33 µg/m<sup>3</sup> in 2012, to 28 µg/m<sup>3</sup> in 2014, and to 26 µg/m<sup>3</sup> in 2016. NO<sub>x</sub> emissions from on-road mobile sources are predicted to decrease by 70 percent from 2015 – 2030 and PM<sub>2.5</sub> emissions are predicted to decrease by 24 percent during the same time frame. In addition, the 2030 on-road PM<sub>2.5</sub> emissions will account for less than three percent of the total direct non-dust PM<sub>2.5</sub> emissions from all sources in the Chico nonattainment area. Because on-road NO<sub>x</sub> emissions account for a larger percentage (28 percent) of the total emissions, the plan includes a sensitivity analysis that demonstrates that the NO<sub>x</sub> emissions from on-road mobile sources would need to increase by 600 percent from 2015 levels

before the area would violate the 2006 24-hour PM<sub>2.5</sub> standard in the Chico nonattainment area.

Our detailed evaluation and conclusions are as follows.

(1) The Chico Area is Attaining the PM<sub>2.5</sub> NAAQS

The EPA determined that the Chico nonattainment area attained the 2006 24-hour PM<sub>2.5</sub> standard on September 10, 2013 (78 FR 55225). This finding was based on ambient air quality data for the period of 2010 to 2012. More recently on May 10, 2017, the EPA determined that the Chico nonattainment area met the 2006 24-hour PM<sub>2.5</sub> standard by its attainment date of December 31, 2015 (82 FR 21711). This finding was based on air quality data for the period from 2013 to 2015. Since that period the air quality has remained well below the 2006 24-hour PM<sub>2.5</sub> standard. Table 5 summarizes the air quality design values for the 2014-2016 period.

Table 5. Summary of Design Values for the 24-hour PM <sub>2.5</sub> NAAQS in the Chico Nonattainment Area (µg/m <sup>3</sup> )		
2014	2015	2016
28	29	26

Source: Plan, Table 3-1.

(2) Motor Vehicle Control Measures Were Not Adopted for the Purpose of Bringing the Area into Attainment

As discussed in more detail in sections V.C. and V.D.2. of this document, the control measures relied upon in the Chico PM<sub>2.5</sub> plan to bring the area into attainment are primarily associated with residential wood burning. While there are statewide motor vehicle emission controls (smog check and vehicle standards) that apply throughout California, those measures were not adopted specifically to bring this area into attainment.

(3) Historical Trends and Future Projections Indicate Motor Vehicle PM<sub>2.5</sub> Emissions are Decreasing

Trends and projections in emissions of PM<sub>2.5</sub> and precursors are presented in several sections of the Chico PM<sub>2.5</sub> plan. Table 3.3 of the Chico PM<sub>2.5</sub> plan shows reductions of total NO<sub>x</sub>, PM<sub>2.5</sub> and SO<sub>x</sub> emissions from 2006 – 2015. During this period, total wintertime emissions of PM<sub>2.5</sub> decreased 11.8 percent while NO<sub>x</sub> emissions decreased by 41.3 percent and SO<sub>x</sub> emissions decreased by 45.3 percent. These trends are projected to continue as shown in Table 6, below. Emissions of NO<sub>x</sub>, for the period from the attainment year of 2015 to the maintenance year of 2030, are estimated to decrease 47 percent and total non-dust PM<sub>2.5</sub> emissions are projected to decrease by 1 percent. On-road motor vehicle emissions decrease even further. Emissions of on-road NO<sub>x</sub> and PM<sub>2.5</sub> are projected to decrease 70 percent and 24 percent, respectively, from 2015 to 2030. These reductions are projected to occur even while vehicle miles travelled are predicted to increase 40 percent from 2014 – 2040. These reductions are due to federal and California motor vehicle regulations such as heavy-duty highway vehicle standards and fuel standards.

Table 6. NO <sub>x</sub> and PM <sub>2.5</sub> Emissions (tons per winter day)				
	2015	2025	2030	Percent change from 2015
Total NO <sub>x</sub>	13.2	7.9	6.9	-47%
On-Road NO <sub>x</sub>	6.3	2.4	1.9	-70%
Total Non-Dust PM <sub>2.5</sub>	4.47	4.5	4.43	-1%
Direct PM from On-Road Motor Vehicles (exhaust, tire wear, and brake wear)	0.17	0.13	0.13	-24%

Source: Plan, Tables 4-5 and 4-6.

#### (4) The Percentage of Motor Vehicle Emissions in the Context of the Total SIP Inventory Decreases Over Time

As shown in Table 7, the percentage contribution of motor vehicle emissions to total emissions for both NO<sub>x</sub> and PM<sub>2.5</sub> generally decreases over time. In the 2015 attainment year, emissions of NO<sub>x</sub> from on-road motor vehicles contribute 48 percent of the total Chico NO<sub>x</sub> emission inventory. By 2030, the contribution of on-road NO<sub>x</sub> is reduced to 28 percent. The overall contribution of on-road motor vehicles to the PM<sub>2.5</sub> inventory is very small. In the 2015 attainment year, emissions of PM<sub>2.5</sub> from on-road motor vehicles contributed only 3.9 percent of the Chico total non-dust emission inventory. By 2030, the percentage declines to 3.0 percent.

Table 7. Percent Contribution of NO <sub>x</sub> and PM <sub>2.5</sub> Emissions			
	2015	2025	2030
Percent On-Road Contribution to Total NO <sub>x</sub> Emission	47.7%	30.4%	27.5%
Percent On-Road Contribution to Non-Dust Total PM <sub>2.5</sub> Emissions	3.9%	2.8%	3.0%

Source: Plan, Tables 4.5 and 4.6.

Although both the total NO<sub>x</sub> inventory and the percentage contribution to the NO<sub>x</sub> inventory from mobile sources decline over time, on-road NO<sub>x</sub> will account for over 27 percent of the total NO<sub>x</sub> inventory in 2030. As verification that this would not affect maintenance of the standard, the Plan includes a modified roll-back analysis that was conducted to determine how much on-road NO<sub>x</sub> emissions would need to increase before the Chico PM<sub>2.5</sub> nonattainment area would experience violations of the 2006 PM<sub>2.5</sub> NAAQS (Attachment F). The roll-back analysis demonstrates that on-road NO<sub>x</sub> emissions would have to increase by approximately 600 percent from 2015 NO<sub>x</sub> emission levels before violations of the PM<sub>2.5</sub> NAAQS would occur in 2030. With NO<sub>x</sub> emissions for the area trending downward, it is highly unlikely that on-road NO<sub>x</sub> emissions could increase 600 percent by 2030.

After evaluating the information provided by BCAQMD and weighing the factors for the insignificance determination outlined in 40 CFR 93.109(f), the EPA is proposing to approve the

determination that the PM<sub>2.5</sub> and NO<sub>x</sub> contributions from motor vehicle emissions to the PM<sub>2.5</sub> pollution for the Chico nonattainment area are insignificant.

If the EPA's insignificance finding is finalized, the Butte County Association of Governments would no longer be required to perform regional emissions analyses for either directly emitted PM<sub>2.5</sub> or NO<sub>x</sub> as part of future PM<sub>2.5</sub> conformity determinations for the 2006 24-hour PM<sub>2.5</sub> NAAQS for the Chico area (the subject of today's proposed action). The EPA's insignificance finding should, however, be noted in the transportation conformity documentation that is prepared for this area. Areas with insignificant regional motor vehicle emissions for a pollutant or precursor are still required to make a conformity determination that satisfies other relevant conformity requirements such as financial constraint, timely implementation of transportation control measures and project level conformity.

## **VI. Proposed Action and Request for Public Comment**

Pursuant to sections 107(d)(3)(E) and 175A of the CAA and based on our review of the Chico PM<sub>2.5</sub> Plan submitted by the State, air quality monitoring data, and other relevant materials, the EPA is proposing to find that the State has addressed all the necessary requirements for redesignation of the Chico nonattainment area to attainment of the 24-hour PM<sub>2.5</sub> NAAQS.

First, under CAA section 107(d)(3)(D), we are proposing to approve CARB's request, which accompanied the submittal of the Chico PM<sub>2.5</sub> Plan, to redesignate the Chico PM<sub>2.5</sub> nonattainment area to attainment for the 2006 24-hour PM<sub>2.5</sub> NAAQS. We are doing so based on our conclusion that the area has met the five criteria for redesignation under CAA section 107(d)(3)(E). Our conclusion is based on our proposed determination that the area has attained the 2006 24-hour PM<sub>2.5</sub> NAAQS; that relevant portions of the California SIP are fully approved;



that the improvement in air quality is due to permanent and enforceable reductions in emissions; that California has met all requirements applicable to the Chico PM<sub>2.5</sub> nonattainment area with respect to section 110 and part D of the CAA; and is based on our proposed approval of the Chico PM<sub>2.5</sub> Plan as part of this action.

Second, in connection with the Chico PM<sub>2.5</sub> Plan showing maintenance through 2030, the EPA is proposing to find that the maintenance demonstration, which documents how the area will continue to attain the 2006 24-hour PM<sub>2.5</sub> NAAQS for 10 years beyond redesignation (*i.e.*, through 2030) and the actions that BCAQMD will take if a future monitored violation triggers the contingency plan, meets all applicable requirements for maintenance plans and related contingency provisions in section 175A of the CAA. The EPA is also proposing to approve the determination that the PM<sub>2.5</sub> and NO<sub>x</sub> contributions from motor vehicle emissions to the PM<sub>2.5</sub> pollution for the Chico nonattainment area are insignificant.

We are soliciting comments on these proposed actions. We will accept comments from the public on this proposal for 30 days following publication of this proposal in the Federal Register and will consider these comments before taking final action.

## **VII. Statutory and Executive Order Reviews**

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, the EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this proposed action merely proposes to approve State law as meeting federal requirements and does not impose additional requirements beyond those imposed by State law. For that reason, this proposed action:

- is not a “significant regulatory action” subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- is not an Executive Order 13771 (82 FR 9339, February 2, 2017) regulatory action because SIP approvals are exempted under Executive Order 12866;
- does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.);
- is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 et seq.);
- does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act; and

- does not provide the EPA with the discretionary authority to address disproportionate human health or environmental effects with practical, appropriate, and legally permissible methods under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where the EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000). We have offered to consult with the Enterprise Rancheria of Maidu Indians of California, the Berry Creek Rancheria of Maidu Indians of California, the Mooretown Rancheria of Maidu Indians of California, and the Mechoopda Indian Tribe of Chico Rancheria, which have lands within the Chico PM<sub>2.5</sub> nonattainment area.

**List of Subjects in 40 CFR Part 52**

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

**List of Subjects in 40 CFR Part 81**

Environmental protection, Air pollution control, National parks, Wilderness areas.

**Authority:** 42 U.S.C. 7401 *et seq.*

Dated: May 1, 2018.

Alexis Strauss  
Acting Regional Administrator,  
Region IX.

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